WHAT IS CLAIMED IS:

1. A protective device for transmitting electromagnetic signals of a desired frequency band, said protective device comprising:

(a) an outer conductor,

(b) an inner conductor extending coaxially within said outer conductor, said inner and outer conductors being spaced apart,

(c) a shunt conductor for shunting electromagnetic signals traveling within said inner conductor which fall outside of the desired frequency band, said shunt conductor comprising a first end and a second end, the first end of said shunt conductor being coupled to said inner conductor, and

(d) a layer of dielectric material, the second end of said shunt conductor being capacitively coupled to said outer conductor through said layer of dielectric material.

2. The protective device of claim 1 further comprising at least one voltage protective component coupled at one end to said outer conductor and at the other end to the second end of said shunt conductor.

3. A protective device for transmitting electromagnetic signals of a desired frequency band, said protective device comprising:

(a) an outer conductor,

(b) an inner conductor extending coaxially within said outer conductor, said inner and outer conductors being spaced apart, and

(c) a shunt conductor for shunting electromagnetic signals traveling within said inner conductor which fall outside of the desired frequency band, said shunt conductor comprising a first end and a second end, the first end of said shunt conductor being coupled to said inner conductor and the second end of said shunt conductor being coupled to said outer conductor,

(d) wherein said shunt conductor comprises first and second contiguous curved portions, said first and second curved portions extending along different arcuate paths.

4. The protective device of claim 3 further comprising a radio frequency impedance control (RFIC) tube disposed between said inner conductor and said outer conductor to control the impedance of said inner conductor, said RFIC tube being shaped to define an opening.

5. The protective device of claim 4 wherein the opening in said RFIC tube is in the form of a slot which extends at a right angle relative to the longitudinal axis for said RFIC tube.

6. The protective device of claim 4 wherein the first portion of said shunt conductor extends out from said inner conductor and through the opening in said RFIC tube along a first arcuate path, the second portion of said shunt conductor projecting in a circumferential path around said RFIC tube along a second arcuate path.

7. A protective device for transmitting electromagnetic signals of a desired frequency band, said protective device comprising:

(a) an outer conductor,

(b) an inner conductor extending coaxially within said outer conductor, said inner and outer conductors being spaced apart,

(c) a shunt conductor for shunting electromagnetic signals traveling within said inner conductor which fall outside of the desired frequency band, said shunt conductor comprising a first end and a second end, the first end of said shunt conductor being coupled to said inner conductor, and

(d) a plurality of voltage protective components, each voltage protective component being coupled at one end to said shunt conductor and at the other end to said outer conductor.

8. The protective device of claim 7 wherein first and second voltage protective components are mounted on one surface of the second end of said shunt conductor and a third voltage protective component is mounted on the other surface of the second end of said shunt conductor.

9. A protective device for transmitting electromagnetic signals of a desired frequency band, said protective device comprising:

(a) an outer conductor,

(b) an inner conductor extending coaxially within said outer conductor, said inner and outer conductors being spaced apart, and

(c) a shunt conductor for shunting electromagnetic signals traveling within said inner conductor which fall outside of the desired frequency band, said shunt conductor comprising a first end and a second end, the first end of said shunt conductor being coupled to said inner conductor and the second end of said shunt conductor being coupled to said outer conductor,

(d) wherein said inner and outer conductors together define a first end connector interface at one end of said protective device and said inner and outer conductors together define a second end connector interface at the other end of said protective device, each of the first and second end connector interfaces being convertible between a male end connector interface and a female end connector interface.

10. The protective device of claim 9 wherein said inner conductor comprises a central pin and first and second elongated members which are removably coaxially mounted over opposite ends of said central pin.

11. The protective device of claim 10 wherein said first and second elongated members can be interchangeably mounted on the central pin.

12. The protective device of claim 10 wherein one end of said first elongated member is shaped to include one of a male pin and a female pin.

13. The protective device of claim 12 wherein one end of said second elongated member is shaped to include one of a male pin and a female pin.

14. A protective device for transmitting electromagnetic signals of a desired frequency band, said protective device comprising:

(a) an outer conductor,

(b) an inner conductor extending coaxially within said outer conductor, said inner and outer conductors being spaced apart,

(c) a shunt conductor for shunting electromagnetic signals traveling within said inner conductor which fall outside of the desired frequency band, said shunt conductor comprising a first end and a second end, the first end of said shunt conductor being coupled to said inner conductor and the second end of said shunt conductor being coupled to said outer conductor, and

(d) a first pair of insulators wrapped around at least a portion of said inner conductor, said first pair of insulators insulating at least a portion of said inner conductor from said outer conductor, said first pair of insulators acting to regulate the longitudinal radio frequency (RF) impedance for said protective device.

15. The protective device of claim 14 wherein said first pair of insulators can be replaced with a second pair of insulators to change the RF impedance for a portion of the length of the inner conductor.

16. The protective device of claim 15 wherein one of said first and second pairs of insulators causes said protective device to operate as a narrow-band device and the other of said first and second pairs of insulators causes said protective device to operate as a wide-band device.

17. The protective device of claim 14 wherein said first pair of insulators is sized and shaped so as to define at least one region of air between said inner conductor and said outer conductor.

18. The protective device of claim 14 wherein said first pair of insulators is sized and shaped such that no region of air is defined between said inner conductor and said outer conductor.

19. The protective device of claim 14 wherein each of said first pair of insulators includes a stepped configuration at one end.

20. The protective device of claim 14 wherein each of said first pair of insulators includes a first annularly-shaped portion and a second annularly-shaped portion, said first and second annularly-shaped portions having different thicknesses.

21. The protective device of claim 14 wherein each of said first pair of insulators is shaped to include a tubular shaped projection which extends between said inner and outer conductors.

22. The protective device of claim 21 wherein a portion of the inside diameter of said outer conductor is approximately 2.2 through 2.5 times the outside diameter of said center conductor so as to define at least one air gap therebetween.

23. The protective device of claim 22 wherein each tubular shaped projection of said first pair of insulators projects into a corresponding air gap between said inner and outer conductors.

24. The protective device of claim 14 wherein said first pair of insulators comprises at least two different dielectric constant materials.

25. A protective device for electromagnetic signals, said protective device comprising:

(a) an outer conductor,

(b) an inner conductor extending coaxially with said outer conductor, said inner and outer conductors being spaced apart, and

(c) a shunt conductor coupled between said inner conductor and said outer conductor, and

(d) wherein said outer and inner conductors together define a connector at each end of said protective device,

(e) wherein said inner conductor has a normal polarity configuration and includes first and second pins,

(f) wherein exchanging the first and second pins of said inner conductor produces a reverse polarity connector configuration.

26. The protective device of claim 25 wherein one connector for said protective device is female of normal polarity and the other connector is convertible between a female interface and a male interface.

27. The protective device of claim 25 wherein male pins are exchanged for female pins, said male pins being the same as in a male to female normal polarity configuration.